

### Patent Claims

1. Rotary printing machine with at least one ink transfer roller (3, 4),
  - which transfers ink that particularly consists of color pigments and solutions towards a print substrate (5) ink from an ink reservoir (2),
  - whereby the intensity of the ink on the print substrate (5) is adjustable through the mixture ratio of the color pigments and the solution in the ink that is transferred from the machine to the print substrate (5)

**characterized in that**

the mixture ratio of the color pigments and the solution in the ink, which is transferred by the machine onto the print substrate (5) by means of at least one mechanism for supporting evaporation of solution (9, 19) on at least one ink transfer roller (3, 4), is influenceable.

2. Rotary printing machine according to Claim 1,

**characterized in that**

it includes at least one mechanism for supporting evaporation of solution (9, 19) on the ink transfer roller (3, 4) that has a blower which blows a suitable gas such as air onto the ink transfer roller (3, 4).

3. Rotary printing machine according to Claim 1

**Characterized in that**

it includes at least the one mechanism for supporting evaporation of solution (9, 19) on the ink transfer roller (3, 4) and has a sucker which increases the volume flow of a suitable gas, such as air, that is led by the ink transfer roller.

4. Rotary printing machine according to Claim 1

**Characterized in that**

it includes at least one mechanism for supporting the evaporation of solution (9, 19) on the ink transfer roller (3, 4) with the following functional units:

- radiant sources, as in particular infrared radiators or microwave emitting devices which spray the ink on at least one ink transfer roller,
- mechanisms for separating of the laminar border layer adhering to the ink transfer roller,
- mechanisms for heating up of at least one of the ink transfer roller.

5. Rotary printing machine according to one of the abovementioned claims

**Characterized in that**

- at least a second ink reservoir (12), which is arranged in the transfer direction between the ink transfer roller (3, 4) and the mechanism for supporting evaporation of solutions (9, 19) on an ink transfer roller (3,4)
- and through which additional ink can be applied to the in transfer roller (3, 4)

6. Rotary printing machine according to one of the abovementioned claims

**Characterized in that**

- at least one other mechanism for supporting of evaporation of solution (9, 19) has an effect on at least one ink transfer roller (3, 4),
- which influences another part of the scope of the ink transfer roller (3, 4).

7. Rotary printing machine according to the Claims 4 and 5

**Characterized in that**

in each case in the ink transfer direction in the printing machine one mechanism for supporting evaporation of solutions (9, 19) on at least one ink transfer roller (3, 4) follows ink that is applicable onto an ink reservoir (2, 12) through which ink can be applied onto an ink transfer roller (3,4),

8. Rotary printing machine according to one of the abovementioned claims

**Characterized in that**

the output of mechanisms for supporting the evaporation of solution (9, 19) on at least one ink transfer roller (3, 4) in operating the printing machine can be controlled and/or regulated.

9. Method for setting the ink intensity on a print substrate (5) printed by a rotary printing machine

- whereby the rotary printing machine is equipped with at least one ink transfer roller (3, 4),
- which transfers ink toward a print substrate, that in particular consists of color pigments and solutions, from a ink reservoir (2, 12) in the direction of a print substrate (5),
- and whereby the intensity of the ink on the print substrate (5) is set through the mixing ratio of the color pigments and the solution in the ink which is transferred by the machine

**characterized in that**

the mixing ratio of the color pigment and the solution

is set by the evaporation of solution being supported on at least one ink transfer roller (3, 4).